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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 5683-2024

Replacing GB/T 5683-2008

Ferrochromium

铬铁

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document replaces GB/T 5683-2008 Ferrochrome: Compared with GB/T 5683-2008, in addition to structural adjustments and editorial changes, the main the main technical changes are as follows:

- a) Low nitrogen and low carbon ferrochrome, low nitrogen and low carbon ferrochrome, low nitrogen and medium carbon ferrochrome and low titanium and high carbon ferrochrome are added to the scope (see Chapter 1);
- b) The number of ferrochrome grades is adjusted from 28 to 68 (see 4.1:1, 3:1:1 of the:2008 edition);
- c) Combine vacuum-processed low-carbon ferrochrome into low-carbon ferrochrome grades according to carbon content (see Table 1, Table 1 of the:2008 edition);
- d) Adjust the range of chromium in high carbon ferrochrome, add FeCr50C7:5 and FeCr50C10:0 grades, where the chromium content range is 45.0%~52.0% (see Table 4, Table 1 of the:2008 edition);
- e) Changed the "Medium-low micro-carbon ferrochrome and low-nitrogen medium-low micro-carbon ferrochrome" to use 60% chromium content as the benchmark unit, high carbon ferrochrome and Low-titanium high-carbon ferrochrome takes 50% chromium content as the benchmark assessment unit" (see 4.1:2, 3:1:2 of the:2008 edition);
- f) The requirements for particle size and non-metallic inclusions have been changed (see 4.2, 3:2 of the:2008 edition);
- g) Added "Determination and Re-examination" (see Chapter 7);
- h) Added distillation separation-Nessler reagent spectrophotometry (see Appendix C):

This document is modified to adopt ISO 5448:1981 "Ferrochrome Specifications and Delivery Conditions":

Compared with ISO 5448:1981, this document has many structural adjustments: The list of structural number changes between the two documents is shown in Appendix A:

This document has more technical differences than ISO 5448:1981:

A list of these technical differences and their causes is given in Appendix B:

1 Scope

This document specifies the technical requirements, test methods, inspection rules, determination and re-inspection, packaging, storage, transportation, marking and quality certification of ferrochrome:

Ming book:

This document applies to ferrochrome used as an alloying agent in steelmaking or casting, including micro-carbon ferrochrome, low-carbon ferrochrome, medium-carbon ferrochrome, high-carbon ferrochrome, Iron, low nitrogen and low carbon ferrochrome, low nitrogen and low carbon ferrochrome, low nitrogen and medium carbon ferrochrome, and low titanium and high carbon ferrochrome:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document:

GB/T 3650 General provisions for acceptance, packaging, storage, transportation, marking and quality certification of ferroalloys GB/T 4010 Sampling and preparation of samples for chemical analysis of ferroalloys GB/T 4699.2 Determination of chromium content of ferrochrome and silicon-chromium alloys - Ammonium persulfate oxidation titration method and potentiometric titration method GB/T 4699.3 Determination of phosphorus content in ferrochrome, silicon-chromium alloy and ferrochrome nitride - Bismuth phospho-molybdenum blue spectrophotometric method and molybdenum blue spectrophotometric method Degree method GB/T 4699.4 Determination of carbon content of ferrochromium and silicon-chromium alloys - Infrared absorption method and gravimetric method GB/T 4699.6 Determination of sulfur content of ferrochrome and silicon-chromium alloys - Infrared absorption method and combustion neutralization titration method GB/T 5687.2 Determination of silicon content in ferrochrome, silicon-chromium alloys and ferrochrome nitride - Perchloric acid dehydration gravimetric method GB/T 5687.11

Determination of chromium, iron and titanium content - Diantipyryl methane spectrophotometric method GB/T 5687.12 Determination of chromium, iron, phosphorus, aluminum, titanium, copper, manganese and calcium content - Inductively coupled plasma atomic emission spectrometry GB/T 5687.13 Determination of chromium, silicon, manganese, titanium, vanadium and iron contents by wavelength dispersive X-ray fluorescence spectrometry (molten glass Slice method) GB/T 13247 Sampling and testing methods for particle size of ferroalloy products

3 Terms and definitions

There are no terms or definitions that require definition in this document:

4 Technical requirements

4.1

Brand and chemical composition

4.1.1

According to the carbon content, ferrochrome is divided into four categories and 68 grades: micro-carbon ferrochrome, low-carbon ferrochrome, medium-carbon ferrochrome and high-carbon ferrochrome:

There are 28 grades of high carbon ferrochrome, 12 grades of low carbon ferrochrome, 18 grades of medium carbon ferrochrome and 10 grades of high carbon ferrochrome: Their chemical compositions shall comply with the provisions of Table 1, Table 2, Table 3 and Table 4: